

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
11 December 2003 (11.12.2003)

PCT

(10) International Publication Number
WO 03/102423 A1

(51) International Patent Classification⁷: **F04C 19/00**, 27/00

(21) International Application Number: PCT/NO03/00128

(22) International Filing Date: 16 April 2003 (16.04.2003)

(25) Filing Language: Norwegian

(26) Publication Language: English

(30) Priority Data:
20021844 19 April 2002 (19.04.2002) NO

(71) Applicant (for all designated States except US): **COMPRESSOR SYSTEMS AS** [NO/NO]; Vesterled 15, 4876 Grimstad (NO).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **KAROLIUSSEN, Hilberg** [NO/NO]; Svaleveien 16, 4950 Risør (NO):

(74) Agent: **TANDBERGS PATENTKONTOR AS**; Box 7085 M, 0306 Oslo (NO).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

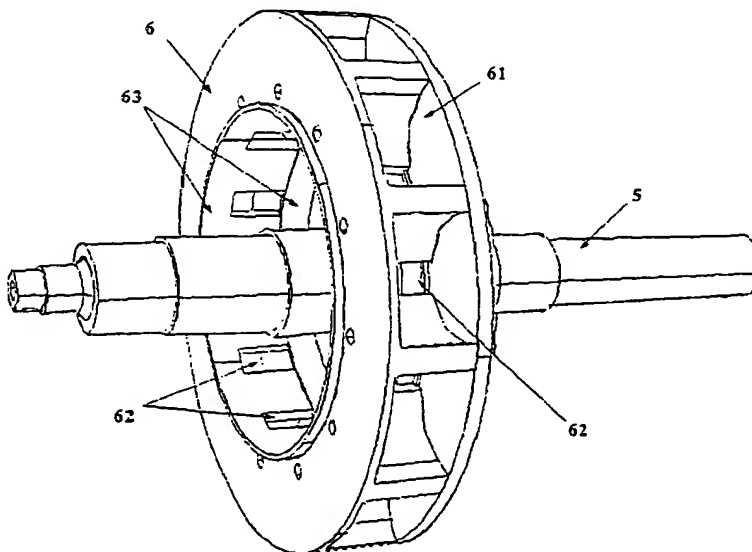
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **LIQUID RING COMPRESSOR**



(57) Abstract: Liquid ring compressor, characterized by an eccentric inner rotor (6) is supported in axles (8,9) to an outer co-rotor (3) for the liquid ring, where the bearing of the co-rotors (11) is outside the same axles on each side is enclosed in an enclosure where it on each sides of the bearing (11) is arranged a rotating lip seal (82) which lip (83) abut the axles (8,9) at low speed, and which at high speed is projected due to centrifugal forces out and lifts itself from the axles, where through holes (81) through the co-rotor's sidewalls and bearing enclosure, its volume within the liquid ring is aired to the surrounding enclosure (1), and ensures that it is not created a differential pressure across the bearings and the seals of the bearings.



WO 03/102423 A1